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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Taka-Aki Sato

Serial No.: 10/092,138

Filed : March 6, 2002

For : A NEW METHOD OF MAKING A PROTEIN ARRAY BASED ON
BIOCHEMICAL PROTEIN-PROTEIN INTERACTION

1185 Avenue of the Americas
New York, New York 10036
June 6, 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In order to ensure compliance with applicant's duty of disclosure under 37 C.F.R. §1.56 and §1.97(a)-(d), applicant hereby submits this Information Disclosure Statement.

Applicant directs the Examiner's attention to the following references which are also listed on Form PTO-1449 attached hereto as **Exhibit A**. Copies of references 1-38 are attached hereto as **Exhibits 1-38**, respectively:

1. U.S. Patent No. 5,632,994, issued May 27, 1997 to Reed et al. (**Exhibit 1**);
2. U.S. Patent No. 5,747,245, issued May 5, 1998 to Reed et al. (**Exhibit 2**);
3. U.S. Patent No. 5,783,666 issued July 21, 1998 to Abertsen et al. (**Exhibit 3**);

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4. U.S. Patent No. 5,876,939 issued March 2, 1999 to Reed et al. (**Exhibit 4**);
5. International Publication No. WO 95/34661 published December 21, 1995 (**Exhibit 5**);
6. International Publication No. WO 96/18641 published June 20, 1996 (**Exhibit 6**);
7. International Publication No. WO 97/11091 published March 27, 1997 (**Exhibit 7**);
8. Desjardins, P., et al. (1990) "Sequence and Gene Organization of the Chicken Mitochondrial Genome", J. Mol. Biol., 212:599-634 (**Exhibit 8**);
9. Itoh, N., et al. (1991) "The Polypeptide Encoded by the cDNA for Human Cell Surface Antigen Fas Can Mediate Apoptosis", Cell, 66:233-243 (**Exhibit 9**);
10. Watanabe-Fukunaga, R., et al. (1991) "Lymphoproliferation disorder in mice explained by defects in Fas antigen that mediates apoptosis", J. Cell Biol., 115:1039-1048 (**Exhibit 10**);
11. Woods, D. F., et al. (1991) "The Discs-Large Tumor Suppressor Gene of Drosophila Encodes a Guanylate Kinase Homolog Localized at Separate Junctions", Cell, 66:451-464

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(Exhibit 11);

12. Cho, K-O., et al. (1992) "The Rat Brain Postsynaptic Density Fraction Contains a Homolog of the Drosophila Discs-Large Tumor Suppressor Protein", Neuron, 9:929-942 (Exhibit 12);
13. Okimoto, R., et al. (1993) "The Mitochondrial Genomes of Two Nematodes, *Caenorhabditis elegans* and *Ascaris suum*", Genetics, 130:471-498 (Exhibit 13);
14. Itoh, N., et al. (1993) "A Novel Protein Domain Required for Apoptosis", J. Mol. Biol., 268:10932-10937 (Exhibit 14);
15. Banville, D., et al. (1994) "A Novel Protein-Tyrosine Phosphatase with Homology to Both the Cytoskeletal Proteins of the Band 4.1 Family and Junction-associated Guanylate Kinases", J. Biol. Chem., 269:22320-22327 (Exhibit 15);
16. Kitamura, K., et al. (1994) "Identification and hypotensive activity of proadrenomedullin N-terminal 20 peptide (PAMP)", FEBS Letters, 351:35-37 (Exhibit 16);
17. Maekawa, K., et al. (1994) "Molecular cloning of a novel protein-tyrosine phosphatase containing a membrane-binding domain and GLGF repeats", FEBS Letters, 337:200-206 (Exhibit 17);

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18. Saras, J., et al. (1994) "Cloning and Characterization of PTPL1, a Protein Tyrosine Phosphatase with Similarities to Cytoskeletal-associated Proteins", J. Biol. Chem., 269:24082-24089 (**Exhibit 18**);
19. Takahashi, T., et al. (1994) "Generalized Lymphoproliferative Disease in Mice, Caused by a Point Mutation in the Fas Ligand", Cell, 76:969-976 (**Exhibit 19**);
20. Boldin, M. P., et al. (1995) "A Novel Protein That Interacts with the Death Domain of Fas/APO1 Contains a Sequence Motif Related to the Death Domain", J. Biol. Chem., 270:7795-7798 (**Exhibit 20**);
21. Chao, M. V., et al. (1995) "p75 and Trk: a two-receptor system", TINS, 18:321-326 (**Exhibit 21**);
22. Chinnaiyan, A. M., et al. (1995) "FADD, a Novel Death Domain-Containing Protein, interacts with the Death Domain of Fas and Initiates Apoptosis", Cell, 81:505-512 (**Exhibit 22**);
23. Kim, E., et al. (1995) "Clustering of Shaker-type K⁺ channels by interaction with a family of membrane-associated guanylate kinases", Nature, 378:85-88 (**Exhibit 23**);
24. Kischkel, F. C., et al. (1995) "Cytotoxicity-dependent APO-

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- 1 (Fas/CD95)- associated proteins form a death-inducing signaling complex (DISC) with the receptor", EMBO Journal, 14:5579-5588 (**Exhibit 24**);
25. Kornau, H-C., et al. (1995) "Domain Interaction Between NMDA Receptor Subunits and the Postsynaptic Density Protein PSD-95", Science, 269:1737-1740 (**Exhibit 25**);
26. McGahon, A. J., et al. (1995) "The End of the (Cell) Line: Methods for the Study of Apoptosis in Vitro", Methods in Cell Biology, 46:153-185 (**Exhibit 26**);
27. Pantel, K., et al. (1995) "Establishment of Micrometastatic Carcinoma Cell Lines: a Novel Source of Tumor Cell Vaccines", J. Natl. Cancer Inst., 87:1162-1168 (**Exhibit 27**);
28. Sato, T., et al. (1995) "FAP-1: A Protein Tyrosine Phosphatase That Associates with Fas", Science, 268:411-415 (**Exhibit 28**);
29. Stanger, B. Z., et al. (1995) "RIP: A Novel Protein Containing a Death Domain That Interacts with Fas/APO-1 (CD95) in Yeast and Causes Cell Death", Cell, 81:513-523 (**Exhibit 29**);
30. Wang, X. W., et al. (1995) "Abrogation of p53-induced Apoptosis by the Hepaatitis B Virus X Gene¹", Cancer Res.,

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55:6012-6016 (**Exhibit 30**);

31. Westendorp, M. O., et al. (1995) "Sensitization of T cells to CD95-mediated apoptosis by HIV-1 Tat and gp120", Nature, 375:497-500 (**Exhibit 31**);
32. Doyle, D. A., et al. (1996) "Crystal Structures of a Complexed and Peptide-Free Membrane Protein-Binding Domain: Molecular Basis of Peptide Recognition by PDZ", Cell, 85:1067-1076 (**Exhibit 32**);
33. Matsumine, A., et al. (1996) "Binding of APC to the Human Homolog of the Drosophila Discs Large Tumor Suppressor Protein", Science, 272:1020-1023 (**Exhibit 33**);
34. Parker, W., et al. (1996) "The Surface of α -Sheet Proteins Contains Amphiphilic Regions Which May Provide Clues About Protein Folding", Proteins, 25:253-260 (**Exhibit 34**);
35. Zhang, J., et al. (1996) "A Mouse Fas-Associated Protein with Homology to the Human Mort1/FADD Protein Is Essential for Fas-Induced Apoptosis", Molecular And Cell Biology, 16:2756-2763 (**Exhibit 35**);
36. Silzel, J. W., et al. (1998) "Mass-sensing, multianalyte microarray immunoassay with imaging detection", Clinical Chemistry, 44(9):2036-2043 (**Exhibit 36**);

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37. Pal, D., et al. (1999) "Estimates of the Loss of Main-Chain Conformational Entropy of Different Residues on Protein Folding", Proteins, 36:332-339 (**Exhibit 37**);
38. Arenkov, P., et al. (2000) "Protein Microchips: Use for Immunoassay and Enzymatic Reactions", Analytical Biochemistry, 278:123-131 (**Exhibit 38**);
39. Mendoza, L.G., et al. (1999) "High-throughput microarray-based enzyme-linked immunosorbent assay (ELISA)", Biotechniques, 27(4)778-780, 782-786, 788;
40. Rowe, C.A., et al. (1999) "An array immunosensor for simultaneous detection of clinical analytes", Analytical Biochemistry, 71(2):433-439.

The subject application was filed March 6, 2002. This Information Disclosure Statement is filed pursuant to 37 C.F.R. §1.97(b)(1), within three months of the filing date of the subject application. Accordingly, the present Information Disclosure Statement is timely filed and no fee or certification is due or required.

If a telephone conference would be of assistance in advancing the prosecution of the subject application, applicant's undersigned attorney invites the Examiner to telephone him at the number provided below.

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No fee is believed to be due in connection with the filing of this Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

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6/6/02
Date